REMARKS

The Examiner has rejected claims 1-18 under 35 U.S.C. 103(a) as being unpatentable over Connors U. S. 6,449,267 in view of Baker et al U. S. 6,775,231.

The Examiner contends that Connors teaches the invention substantially as claimed including method and apparatus for medium access control from integrated services packet-switched satellite network.

As to claim 1, the Examiner contends that Connors teaches a system that comprises a gateway that interfaces to an Internet provider or corporate network, a local area network edge device, a satellite that provides a communication link between the gateway and the local area network edge device and one or more personal computers coupled by way of a network to the local area network edge device, a dynamic resource allocation system that supports differentiated services with different levels of priority, comprising:

A dynamic assignment/multiple access (DAMA) communication protocol for transmitting data over the system (col. 2, lines 38-47, Connors discloses Fig. 1....a communication system using a demand assignment multiple access (DAMA) protocol...DAMA based MAC protocols comprise two primary elements: (1) a bandwidth request mechanism and (2) a mechanism for coordinating transmission).

The Examiner, however, admits that Connors fails to teach an Internet protocol network.

However, the Examiner goes on to state that Baker teaches dynamic weighted resource sharing and that Baker teaches an Internet protocol network (col. 1, lines 6-8, Baker discloses the present invention relates to data networking and more particularly to providing differentiated services on an Internet Protocol network such as the Internet).

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide an Internet protocol network and that one would be motivated to do so to allow access to the Internet.

Further the Examiner admits that Connors fails to teach a classifier for identifying specific types of messages.

However, according to the Examiner, Baker teaches a classifier for identifying specific types of messages (col. 5, lines 26-29, Baker discloses a classifier 302 checks a special Differentiated Services field of each packet header to identify the packet's Assured Forwarding class. The packets are separated by Assured Forwarding class).

The Examiner finally concludes it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide a classifier for identifying specific types of messages, the motivation being to allow policies for sharing resources among multiple service classes to be enforced (abstract).

Applicants respectfully submit that Connors '267 is directed to "A method, apparatus, article of manufacture, and a memory structure for communicating data from a first node to a second node....The method comprises the steps of receiving input data at the first node, transmitting a resource request having a resource metric from the first node to an allocating agent, receiving an allocation of resource units according to the resource metric, the resource units comprising at least one DAMA channel resource metric and at least one RA channel resource unit, queuing the input data into the DAMA channel buffer, dequeuing input data from the DAMA channel buffer into the RA channel buffer according to a comparison between a predicted transmission delay and a delay threshold, and transmitting the dequeued input data in the RA channel buffer via the RA resource units. The article of manufacture comprises a data storage device tangibly embodying instructions to perform the method steps described above. The apparatus comprises a receiver for receiving input data, a DAMA channel buffer for accepting the input data, a resource unit request module, operatively coupled to the transmitter and the receiver, the resource unit request module for generating a resource request metric when indicated by an information rate of the input data, and for receiving an allocation of resource units via the receiver, and a channel selection module, for dequeuing input data from the DAMA channel buffer to an RA channel buffer according to a predicted channel delay and a delay threshold."

At col. 2, lines 38-47 and in Fig. 1 of Connors '267 there is disclosed a diagram showing the operation of a communication system using a demand assigned multiple access (DAMA) protocol. DAMA techniques, which address the capacity issue by using instantaneous bandwidth demands to statistically multiplex many variable bit rate (VBR) sources on one channel, can be used to deliver predictable delays without the poor capacity of fixed bandwidth allocation (FBA). DAMA based medium access control (MAC) protocols comprise two primary elements: (1) a bandwidth request mechanism and (2) a mechanism for coordinated transmission.

In Baker et al 6,775,231 there is disclosed "In one embodiment, the technique dynamically adjusts resource allocations for each traffic class based on actual traffic load measured for each service class. In this way, the per-hop-behavior required by a differentiated service model may be achieved. Core nodes of a network operating according to a differentiated service model dynamically adjust resource allocations for multiple traffic classes without requiring explicit signaling from other network nodes. Policies for sharing resources among multiple service classes can be enforced."

Applicants respectfully submit that at col. 1, lines 6-8 of Baker '231 there is disclosed that "The present invention relates to data networking and more particularly to providing differentiated services on an Internet Protocol network such as the Internet."

Applicants respectfully disagree that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide an Internet protocol network, the motivation being to allow access to the Internet. Applicants respectfully contend that Connors '267, directed to services packet-switched satellite networks, is not properly combinable with Baker '231, directed to dynamic weighted resource sharing, since in neither reference is there any suggestion, implication or motivation to combine one with the other, aside from Applicants' own specification.

Further, as the Examiner admits, Connors fails to teach a classifier for identifying specific types of messages and Baker does little to cure this deficiency at col. 5, lines 26-29 relied upon by the Examiner. It is not clear to Applicants that the identifying of the packet's Assured Forwarding class as disclosed in Baker '267 at col. 5, lines 27 et seq. contemplates the classifier of Applicants which identifies specific types of messages. Further, as recited above, Applicants respectfully submit that it is highly improbable that one of ordinary skill in the art would be motivated to combine Baker with the non-analogous Connors, there being no motivation, suggestion or implication to do so in either reference as recited above.

Therefore, Applicants respectfully disagree that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide a classifier for identifying specific types of messages, the motivation being to allow policies for sharing resources among multiple service classes to be enforced as contended by the Examiner.

Further, Applicants respectfully submit that Connors '267, aside from the use of a satellite and a demand assign multiple access (DAMA), is completely non-analogous and neither teaches, suggests or implies the system as defined in claim 1 of the instant claims. Applicants further contend that Connors '267 does not employ a gateway that interfaces to an Internet service provider or corporate network; a local area network edge device; a satellite that provides a communication link between the gateway and the local area network edge device; or a dynamic resource allocation system as opposed to a demand resource allocation system that comprises an Internet protocol network comprising a classifier for identifying specific types of messages and a dynamic assignment/multiple access (DAMA) communication protocol for transmitting data over the system. Applicants respectfully submit that the non-analogous Baker '231 is not properly combinable with Connors, there being no motivation, suggestion or implication in either reference to do so other than Applicants' own specification, and in any case, however said references are combined, Baker does little to cure the deficiencies of Connors '267.

As to claim 2, the Examiner states that Baker teaches the dynamic resources allocation system recited in claim 1 wherein the satellite is a non-processing satellite (col. 2, lines 62-64, Connors discloses in a satellite network 100, the AA 108 resides...at a terrestrial master control station...).

Applicants respectfully disagree that Baker, directed to a technique which dynamically adjusts resource allocations for each traffic class based on actual traffic load measured for each service class for application to the Internet and is totally devoid of any application, suggestion or implication to employ this technique in satellite communications, in any way teaches the dynamic resources allocation system recited in claim 1. Furthermore, Applicants respectfully contend that at col. 2, lines 62-66 of Connors there is merely disclosed an instantaneous bandwidth allocating agent AA 108 which performs bandwidth allocations in satellite networks. Applicants respectfully submit this does little to cure the deficiencies of Baker as recited above. Further, Applicants respectfully contend that in essence, as seen in the specification and claims of Connors '267, there is taught a receiver for receiving input data, a demand assigned multiple access (DAMA) channel buffer for accepting the input data, a resource unit request module which is coupled to a transmitter and a receiver so that the resource unit request module generates a resource request metric for receiving allocation of resource units via the receiver and a channel selection module for dequeuing the input data from the DAMA channel buffer to a random access channel according to a comparison between a predicted transmission delay and a delay threshold. The primary system and concern of Connors '267 is as is seen in col. 4, lines 36 et seq. "There is therefore a need for a medium access control protocol that allows transmission of information with minimal delay, while simultaneously maximizing resource unit utilization. The present invention satisfies that need."

Applicants respectfully submit that although the teaching at the recited passage indicates that the allocating agent (AA) 108 may reside either in the satellite or at a terrestrial station, this in and of itself does not define a non-processing satellite as required by claim 2. Applicants respectfully submit that Connors '267 is absolutely silent with regard to other processing assets that may be possessed by satellite 102 and certainly does not exclude same so that in Applicants' view 102 is not taught to be a non-processing satellite at the recited passage as relied upon by the Examiner.

As to claim 3, the Examiner states that Connors teaches the dynamic resource system recited in claim 2 wherein the non-processing satellite is a bent pipe communication link (col. 2, lines 62-64, Connors discloses in a satellite network 100, the AA 108 resides...at a terrestrial master control station...).

However, the Examiner admits that Connors fails to teach communications link between the local area network edge device and the gateway.

Further, the Examiner states that Baker teaches communications link between the local area network edge device and the gateway (col. 4, lines 56-61, Baker discloses Network 200 represents a Differentiated Services domain. Edge nodes 202 classify incoming traffic into one of a plurality of behavior aggregates. In one embodiment, network 200 implements an Assured Forwarding service and edge nodes 202 classify packets to be forwarded into network 200 into one of four service classes).

The Examiner concludes it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide the non-processing satellite implements a bent pipe communication link between the local area network edge device and the gateway, the motivation to do so being to allow policies for sharing resources among multiple service classes to be enforced (abstract).

Applicants respectfully contend that Connors does not teach the dynamic resource system recited in claim 2 wherein the non-processing satellite is a bent pipe communication link for reasons recited above with regard to claim 2 relating to the DAMA and the non-processing satellite, which arguments are hereby respectfully incorporated by reference. Further, in Baker at col. 4, lines 56-61 there is no where disclosed a communications link between the local area network edge device and the gateway since Baker is no where concerned with satellite communications and does not contemplate, suggest, teach or imply the use of a gateway nor a communications link between the local area network edge device and the gateway.

Therefore, Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide the non-processing satellite implements a bent pipe communication link between the local area network edge device and the gateway, the motivation being to allow policies for sharing resources among multiple service classes to be enforced.

As to claim 4, the Examiner contends that Connors teaches the dynamic resources allocation system recited in claim 1 wherein the satellite is a processing satellite comprising an onboard resource management element (col. 2, lines 62-64, Connors discloses in a satellite network 100, the AA 108 resides...at the satellite...).

Applicants respectfully submit that Connors does not teach the dynamic resource allocation system recited in claim 1 wherein the satellite is a processing satellite comprising an onboard resource management element as set out at col. 2, lines 62-64 or the disclosed satellite network 100 for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

As to claim 5, the Examiner contends that Connors teaches the dynamic resources allocation system recited in claim 1 wherein there is a DAMA communication protocol (col. 2, lines 38-47, Connors discloses Fig. 1...a communication system using a demand assignment multiple access (DAMA) protocol...DAMA based MAC protocols comprise two primary elements: (1) a bandwidth request mechanism and (2) a mechanism for coordinating transmission).

The Examiner admits that Connors fails to teach an application detection algorithm but reasons that Baker teaches an application detection algorithm (col. 6, lines 1-6, Baker discloses in one embodiment, an exponential averaging process is used to determine the packet arrival rate for each service class every time a new packet arrives. Let t.sub.k be the arrival time of a new packet and let l.sub.k be the length of the new packet where K is a sequential identifier identifying the new packet).

The Examiner concludes it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide the DAMA communication protocol comprising an application detection algorithm, the motivation to do so would be to allow each packet header to identify the packet's Assured Forwarding class (col. 5, lines 27-28).

Applicants respectfully submit that Connors does not teach the dynamic resources allocation system recited in claim 1 wherein there is a DAMA communication protocol (col. 2, lines 38-47 or as Connors discloses in Fig. 1 a communication system using a demand assigned multiple access (DAMA) protocol...DAMA based MAC protocols comprising two elements...) for the reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

Applicants gratefully acknowledge the Examiner's admission that Connors fails to teach an application detection algorithm.

Applicants respectfully contend that in Baker at col. 6, lines 1-6 there is disclosed an exponential averaging process to determine the packet arrival rate for each service class every time a new packet arrives. Applicants respectfully contend that this in no way teaches, suggests or implies the application detection algorithm as defined in claim 5 and further that Baker is not properly combinable with Connors in any manner to properly reject claim 5 since there is no suggestion, teaching or implication or motivation in either reference to so combine them aside from Applicants' disclosure.

Therefore, Applicants respectfully contend that it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide the DAMA communication protocol comprising an application detection algorithm, the motivation being to allow each packet header to identify the packet's Assured Forwarding class as contended by the Examiner relying on col. 5, lines 27-28 of Baker.

As to claim 6, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 1 wherein the DAMA communication protocol comprises a resource requirement estimation algorithm that is based on queue statistics versus performance statistics (col. 12, lines 1-6, Connors discloses the channel selection module...and the random access queue...to form delay estimates of the last packet in each queue).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 1 wherein the DAMA communication protocol comprises a resource requirement estimation algorithm that is based on queue statistics versus performance statistics (col. 12, lines 1-6 relied upon by the Examiner wherein the Examiner contends Connors discloses the channel selection module...and the random access queue...to form delay estimates of the last packet in each queue) for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

As to claim 7, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 1 wherein the DAMA communication protocol comprises a resource request that generates a resource request to set required resources (col. 4, lines 45-49, Connors discloses the method comprises...transmitting a resource request having a resource metric from the first node to an allocation of resource units according to the resource metric).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 1 as contended by the Examiner with regard to his rejection of claim 7 for the reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference and furthermore that at col. 4, lines 45-49 of Connors there is not taught, suggested or implied the resource request that generates a resource request to set requires resources as set out in claim 7.

As to claim 8, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 1 wherein the DAMA communication protocol comprises a resource request that sends raw queue statistics to the gateway to set required resources (col. 4, lines 60-67, Connors discloses the apparatus comprises...a DAMA channel buffer...the resource unit request module for generating a resource request metric when indicated by an information rate of the input data, and for receiving an allocation of resource units via a receiver...for dequeuing input data from the DAMA; col. 11, lines 14-16, Connors discloses Fig. 8 shows block diagram of a first node 112 such as an earth station 104 employing the technique of dequeuing data from the DAMA queue to the RA queue).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 1 as contended by the Examiner with regard to his rejection of claim 8 for reasons recited above with regard to claim 1 which are hereby

respectfully incorporated by reference and furthermore Applicants respectfully contend that at col. 4, lines 60-67 of Connors there is not taught, suggested or implied the DAMA communication protocol comprising a resource request that sends raw queue statistics to the gateway to set required resources as required by claim 8. This deficiency is not remedied in Connors at col. 11, lines 14-16 as contended by the Examiner nor in Fig. 8 depicting first node 112 such as an earth station 104 employing the technique of dequeuing data from the DAMA queue to the RA queue.

As to claim 9, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 1.

However, the Examiner admits that Connors fails to teach the DAMA communication protocol comprises a weighted fair queuing algorithm that performs a weighted fair queuing that drains the queues while effectively utilizing the gateway assigned resources.

However, the Examiner contends that Baker teaches a weighted fair queuing algorithm (Fig. 3; col. 1, lines 54-60, Baker discloses it is known to support prioritization among different traffic sources or different classes by using queuing techniques such as Weighted Fair Queuing (WFQ), or Weighted Round-Robin (WRR) queuing. These techniques involve dividing traffic among multiple queues and allocating limited packet forwarding bandwidth among the queues according to weights assigned to each queue).

The Examiner concludes it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide the DAMA communication protocol comprises a weighted fair queuing algorithm that performs a weighted fair queuing that drains the queues while effectively utilizing the gateway assigned resources, the motivation to do so being to allow prioritization among different traffic sources or different classes (col. 1, lines 54-55).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 1 as set out in the Examiner's rejection of claim 9 for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference. Applicants respectfully submit that this not remedied in either Fig. 3 or at col. 1, lines 54-60 of Baker which is directed to supporting prioritization among different traffic sources or different classes by using queuing techniques described therein since Baker is non-analogous art, not properly combinable with Connors, nor is the disclosure in Baker in any way sufficient to teach, suggest or imply the weighted fair queuing algorithm that performs a weighted fair queuing that drains the queues while effectively utilizing the gateway assigned resources as required in claim 9.

Applicants therefore disagree it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide the DAMA

communication protocol comprises a weighted fair queuing algorithm that performs a weighted fair queuing that drains the queues while effectively utilizing the gateway assigned resources, the motivation being to allow prioritization among different traffic sources or different classes.

As to claim 10, the Examiner contends that ~~Baker~~ **(should be Connors)** teaches the dynamic resource allocation system recited in claim 1 wherein the gateway comprises an algorithm that accumulates all requests received at the same time (col. 9, lines 58-62, Connors discloses the measured size of the received data packets is accumulated over time window Tc, as shown in 608, wherein the time window Tc is determined...).

Applicants respectfully disagree that ~~(neither Baker nor)~~ Connors teaches the dynamic resource allocation system recited in claim 1 wherein the gateway comprises an algorithm that accumulates all requests received at the same time (col. 9, lines 58-62, Connors discloses the measured size of the received data packets is accumulated over time window Tc, as shown in 608, wherein the time window Tc is determined...).

Applicants respectfully submit that ~~(neither Baker nor)~~ Connors does not teach the DAMA of claim 1 for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference and furthermore at col. 9, lines 58-62, relating to the measured size of the received data packets accumulated over time, in no way suggests, teaches or implies the algorithm of claims 10 that accumulates all requests received at the same time.

As to claim 11, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 1.

However, the Examiner admits that Connors fails to teach the gateway comprises an algorithm that functions to assign each edge device a time and frequency resources based upon service classes and consumer profile for each current and previous.

However, the Examiner contends that Baker teaches the gateway comprises an algorithm that functions to assign each edge device a time and frequency resources based upon service classes and consumer profile for each current and previous request (abstract, Baker discloses...the technique dynamically adjusts resource allocations for each traffic class based on actual traffic load measured for each service class...; col. 1, lines 49-54, Baker discloses to support a Differential Services model such as Assured Forwarding, a network node internal to the service provider network must operate packet schedulers for each of its output interfaces to ensure that each class to be output via the interface receives service corresponding to its defined per hop behavior; col. 4, lines 56-61, Baker discloses Network 200 represents a Differentiated Services domain. Edge nodes 202 classify incoming traffic into one of a plurality of behavior aggregates. In one embodiment,

network 200 implements an Assured Forwarding service and edge nodes 202 classify packets to be forwarded into network 200 into one of four service classes).

The Examiner concludes it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide the gateway comprises an algorithm that functions to assign each edge device a time and frequency resources based upon service classes and consumer profile for each current and previous request, the motivation to do so to allow a differentiated service model achieved (abstract).

Applicants respectfully submit that Connors does not teach the dynamic resource allocation system recited in claim 1 as set out with regard to the Examiner's rejection of claim 11 for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

Furthermore, Applicants respectfully contend that at col. 1, lines 49-54 of Baker, which is non-analogous art and improperly combinable with Connors, which discloses a differential services model such as Assured Forwarding, and col. 4, lines 56-61 of Baker which discloses network 200 representing a differentiated services domain, in no way teaches, suggests or implies the algorithm of claim 11 which functions to assign each edge device a time and frequency resources based upon services classes and consumer profile for each current and previous request.

Therefore, Applicants respectfully disagree it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Connors in view of Baker to provide the gateway comprises an algorithm that functions to assign each edge device a time and frequency resources based upon service classes and consumer profile for each current and previous request, the motivation being to allow a differentiated service model achieved.

As to claim 12, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 1 wherein the DAMA communication protocol comprises three modes, including fixed assignment, reservation assignment, and random assignment modes (Fig. 7; col. 2, lines 6-7, Connors discloses these methods vary from random access (RA) to fixed bandwidth allocation (FBA) protocols).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 1 as described in the Examiner's rejection of claim 12 for the reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

Furthermore, Applicants respectfully submit that in Fig. 7 and col. 2, lines 6-7 of Connors, disclosing several methods for gaining channel access in a shared channel system, in no way teaches, suggests or implies the DAMA communication protocol

comprising three modes, including fixed assignment, reservation assignment, and random assignment modes as set out in claim 12.

As to claim 13, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 12 wherein, in the fixed assignment mode, a certain amount of bandwidth is allocated for the highest priority users (col. 2, lines 19-25, Connors discloses terminal acquires a fixed amount of channel resources and maintains this resource for the life of the connection. The only time the amount of channel resource may change is when the connection is preempted by another connection with higher priority).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 12 for reasons recited above with regard to both claim 12 and claim 1 which are hereby respectfully incorporated by reference.

Furthermore, Applicants respectfully submit that at col. 2, lines 19-25 of Connors, which discloses fixed bandwidth allocation, does not teach, suggest or imply the fixed assignment mode of claim 13 which requires a certain amount of bandwidth allocated for the highest priority users.

As to claim 14, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 12 wherein, in the reserved assignment mode, reservation bandwidth is allocated for users to request their demand without knowledge of others request transmissions (col. 2, lines 55-62, Connors discloses in the request phase, data bandwidth is reserved by the earth station (ES) by a resource request module 116 forming and transmitting a resource requesting having a resource metric that represents the current value of the earth station's 104 desired bandwidth. This resource request phase allows the ES to communicate their instantaneous bandwidth needs to an allocating agent (AA) 108, which performs bandwidth allocation).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 12 as set out in the Examiner's rejection of claim 14 for the reasons recited above with regard to claim 12 and claim 1 which are hereby respectfully incorporated by reference.

Furthermore, Applicants respectfully contend that at col. 2, lines 55-62 of Connors, relating to data bandwidth reserved by the earth station by a resource request module...having a resource metric that represents the current value of the earth station's desired bandwidth, in no way teaches, suggests or implies the reservation assignment mode of claim 14 requiring reservation bandwidth allocated for users to request their demand without knowledge of others request transmissions.

As to claim 15, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 12 wherein, in the random access mode, users transmit the data without making reservation (Fig. 7, item 708; col. 2, lines 5-18, Connors

discloses...The simplest form of random access is an access protocol wherein the remote users (in this case, earth terminals) transmit packets in an uncoordinated manner. Since collision-free channel resources cannot be guaranteed with RA methods, QoS guarantees, in terms of packet loss and delay, are very weak...).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 12 as employed by the Examiner in his rejection of claim 15 for reasons recited above with regard to claim 12 and claim 1 which are hereby respectfully incorporated by reference.

Furthermore, Applicants respectfully contend that in Fig. 7, item 708 and at col. 2, lines 5-18 of Connors, relating to several methods for gaining channel access in a shared channel system, does not suggest, teach or imply the random assignment mode wherein users transmit the data without making reservations as set out in claim 15.

As to claim 16, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 1 wherein the DAMA communication protocol comprises a collision resolution algorithm (col. 6, lines 34-38, Connors discloses packets use random access channel only during scene changes, collisions on the RA channel only occur if scene changes occurs simultaneously...).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 1 as applied in the Examiner's rejection of claim 16 for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

Furthermore, Applicants respectfully contend that at col. 6, lines 34-38 of Connors, relating to packets using the random access channel only during scene changes wherein collisions on the RA channel only occur if scene changes occur simultaneously in independent uplink video sessions, neither teaches, suggests or implies the DAMA communication protocol set out in claim 16 which comprises a collision resolution algorithm.

As to claim 17, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 12 wherein the boundary between the random access mode and the reservation mode is movable in order to reduce the number of collisions whenever there are more best effort users using the system (col. 5, lines 6-11, Connors discloses since packets are moved from the DQ to RAQ on NL packet 1108 basis, random transmission patterns will remain unchanged until the entire NL packet 1108 has been transmitted. For light network loads, this amounts to a new slot pattern each TDMA frame 1104, minimizing the effort of possible collisions).

Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 12 as the Examiner has set out in his rejection of claim 17

for reasons recited above with regard to claim 12 and claim 1 which are hereby respectfully incorporated by reference.

Furthermore, Applicants respectfully contend that at col. 5, lines 6-11 of Connors, relating to requesting metric used with a channel that is both random access and DAMA and describes a MAC protocol which solves the delay/capacity trade-off, neither teaches, suggests or implies the dynamic resource allocation system of claim 17 wherein the boundary between the random assignment mode and the reservation mode is movable in order to reduce the number of collisions whenever there are more best effort users using the system.

As to claim 18, the Examiner contends that Connors teaches the dynamic resource allocation system recited in claim 1 wherein the DAMA communication protocol comprises a bandwidth request algorithm, a connection acceptance algorithm, a bandwidth usage detection algorithm, and a resource assignment algorithm (Fig. 3; abstract, Connors discloses...DAMA channel buffer for accepting the input data, a resource unit request module, operatively coupled to the transmitter and the receiver, the resource unit request module for generating a resource request metric when indicated by an information rate of the input data, and for receiving an allocation of resource units via the receiver, and a channel selection module, for dequeuing input data from the DAMA channel buffer to an RA channel buffer according to a predicted channel delay and a delay threshold...).

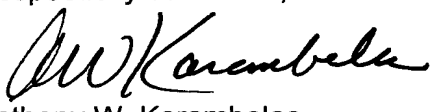
Applicants respectfully disagree that Connors teaches the dynamic resource allocation system recited in claim 1 as contended by the Examiner in his rejection of claim 18 for reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

Furthermore, Applicants respectfully submit that in Fig. 3 of Connors and in the abstract there is neither taught, suggested or disclosed the dynamic resource allocation system as set out in claim 18 wherein the DAMA communication protocol comprises a bandwidth request algorithm, a connection acceptance algorithm, a bandwidth usage detection algorithm, and a resource assignment algorithm.

Applicants respectfully submit that in view of the above remarks, all the claims presently under prosecution have been shown to contain patentable subject matter and to be patentably distinguishable over the prior art of record, Connors and Baker, alone or in any combination.

Accordingly, Applicants respectfully request that this application be reviewed and reconsidered in view of the above remarks and that a Notice of Allowance be issued at an early date.

Respectfully submitted,



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